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YOUNG INTERNATIONAL PATENT&LA

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PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
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PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43bis.1)



Applicant's or agent's file reference FGPD04-004		Date of mailing (day/month/year) 18 OCTOBER 2004 (18.10.2004)
FOR FURTHER ACTION See paragraph 2 below		
International application No. PCT/KR2004/001615	International filing date (day/month/year) 01 JULY 2004 (01.07.2004)	Priority date(day/month/year) 05 JULY 2003 (05.07.2003)
International Patent Classification (IPC) or both national classification and IPC Dc7 H02K 7/065		
Applicant LG INNOTEK CO.,LTD et al		

1. This opinion contains indications relating to the following items:


- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.  
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer JEON, Yong Hai Telephone No. 82-42-481-5657
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Form PCT/ISA/220 (written opinion) (January 2004)

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/KR2004/001615

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(h)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material
- ☐ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☐ in written format
- ☐ in computer readable form
- c. time of filing/furnishing
- ☐ contained in the international application as filed.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/001615

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

<b>Novelty (N)</b>	Claims	1-28	YES
	Claims	None	NO
<b>Inventive step (IS)</b>	Claims	11, 12	YES
	Claims	1-10, 13-28	NO
<b>Industrial applicability (IA)</b>	Claims	1-28	YES
	Claims	None	NO

**2. Citations and explanations :**

Reference is made to the following documents:

D1: KR 370639 B (SAMSUNG ELECTRO-MECHANICS CO., LTD.) 5 Feb. 2003

D2: KR 2003-15814 A (SAMSUNG ELECTRO-MECHANICS CO., LTD) 25 Feb. 2003

**Novelty**

Claims 1-28 comply with the requirement of novelty as set forth in PCT Article 33(2).

**Inventive Step**

Claims 11 and 12 comply with the requirement of inventive step as set forth in PCT Article 33(3). However, claims 1-10 and 13-28 do not comply with the requirement of inventive step as set forth in PCT Article 33(3). The reasons are as follows:

Neither D1 nor D2 discloses the vibration device according to the present claims 1-10 and 13-28.

D1 discloses a multi actuator comprising: a case having a space and a groove therein; a vibration plate for generating sound; a voice coil fixed to a lower end portion of the vibration plate; a magnet magnetized vertically; an upper plate attached to the magnet; a yoke for generating the magnetic field together with the magnet; a weight constituting vibration mass together with the yoke, having at least two projections on an outer peripheral surface thereof; upper and lower plate springs fixed to the groove of the case; and a vibration coil installed in an upper surface of a shield plate.

D2 discloses a multi-functional actuator comprising: a housing having an internal space and a groove in the inner side thereof; a sound-generating diaphragm with an outer end fixed to the upper end of said housing; a voice coil fixed to the bottom of said diaphragm; a vertically magnetized magnet; an upper plate attached to said magnet for forming a magnet circuit; a yoke for forming the magnetic circuit together with said magnet; a weight for defining a vibration body together with said yoke; a leaf spring fixed into said grooves of the housing and having a portion of curvature; and a vibration coil installed in said housing for generating vibration using a magnetic flux formed in a magnetic system.

Therefore, a person skilled in the technical field of the present invention would arrive at the subject matter of claims 1-10 and 13-28 without the exercise of inventive skill by simply combining the teachings of D1 and D2. Consequently, the subject matter of claims 1-10 and 13-28 does not possess an inventive step.

**Industrial Applicability**

Claims 1-28 comply with the requirement of industrial applicability as set forth in PCT Article 33(4).